

RARE-EARTH DOPED PHOSPHATE-GLASS SINGLE-MODE FIBER LASERS

ABSTRACT OF THE INVENTION

A compact low-cost continuous single-mode fiber laser
5 delivers output powers in excess of 50 mW over the C-band
(1530 nm- 1565 nm). The phosphate glass fiber supports the
high doping concentrations of erbium and ytterbium (Er:Yb)
without self-pulsation that are required to provide sufficient
gain per centimeter needed to achieve high power in the ultra
10 short cavity lengths necessary to support single-mode lasers.
The use of fiber drawing technology provides a lower cost
solution than either combined solution doping/MCVD fiber
fabrication or waveguide fabrication. The ability to multi-
mode clad pump the fiber further reduces cost, which is
15 critical to the successful deployment of fiber lasers in the
burgeoning metro markets.